Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

NEWS AND NOTES

Mr. Frank D. Kern, of Purdue University, spent the month of January at the Garden, continuing his studies of the Uredineae of North America.

Dr. M. A. Howe recently returned from an expedition to Panama made primarily for the purpose of collecting marine algae. A number of fungi that inhabit marshy ground and driftwood were secured on this expedition. The February JOURNAL contains Dr. Howe's report.

A monograph by Dr. C. H. Kauffman of the fifty-six species of *Russula* found in the state of Michigan has recently appeared as a reprint from the eleventh report of the Michigan Academy of Science. It should prove of great value to students of this very difficult genus of gill-fungi.

Several species of Boletaceae have been treated popularly, with illustrations from growing plants, in an article by Mr. W. H. Ballou in the Scientific American Supplement for December 18, 1909.

Mr. Norman Taylor returned from Santo Domingo on January 2, bringing with him 1,700 specimens of plants for the Garden herbarium, among them several specimens of fungi, the perishable species of which were illustrated in colors by Mrs. Taylor. A full account of Mr. Taylor's experiences appeared in the JOURNAL of the Garden for January.

Volume 9, part 3, of North American Flora, containing descriptions of the Boletaceae and Chantereleae by W. A. Murrill, and the genus *Lactaria* by Gertrude S. Burlingham, appeared

February 3, 1910. Several new genera and new species are published in this part.

Professor Bruce Fink, of Oxford, Ohio, has begun a study of the Graphidaceae, and wishes to see as much newly collected material from tropical regions as can be secured. He would be glad to receive such collections for determination or to correspond with collectors in any tropical or subtropical regions.

"Some Problems in the Evolution of the Lower Fungi" (Annales Mycologici 7: 441–472. 1909), by Professor G. F. Atkinson, recently appeared as Publication 43 of the Botanical Society of America, being the address of the retiring president delivered at the Baltimore meeting in 1908. The author advances a number of strong arguments in support of the theory that the lower fungi are derived from unicellular organisms, either colorless or chlorophyll-bearing, rather than from the confervoid or siphonaceous algae.

Dr. W. A. Murrill returned from Mexico January 29 with 2,000 specimens of fleshy and woody fungi, collected at various elevations from the vicinity of Cordoba and Jalapa on the east to Colima and Tecoman on the west. Accompanying the collection are 120 colored illustrations of the more perishable species, drawn by Mrs. Murrill. Many interesting original photographs were also secured. A full account of this expedition will appear in the JOURNAL of the Garden for March.

The gray squirrels in the Hemlock Grove have found the severe winter very trying without their accustomed store of chestnuts. Mr. E. W. Humphreys recently observed one of them making a meal on *Stereum hirsutum,* a leathery fungus occurring commonly on dead wood, which would seem unpalatable to the last degree. During the summer, squirrels are very fond of species of *Russula,* and other fleshy forms appearing on the forest floor, and red squirrels in Alaska have been known to carry fleshy forms into the trees and preserve them for future use; but I believe this is the first instance recorded where a tough form like *Stereum* has been so used.

The danger to buildings from the dry rot fungus (*Merulius lacrymans*) has not been recognized in this country as it has in Europe and builders have been allowed to use unseasoned wood to a large extent. A recent investigation in New York City by Professor I. H. Woolson, of Columbia University, brought to light an astonishing condition of affairs in a great number of wooden buildings, which may collapse as did the Gledhill factory unless speedily repaired.

The first annual meeting of the American Phytopathological Society was recently held in Boston in connection with the meetings of the A. A. A. S. A large number of interesting papers on plant diseases were presented. The following officers were elected for the ensuing year: *President,* F. L. Stevens; *Vice-president,* A. F. Woods; *Secretary-Treasurer,* C. L. Shear, U. S. Department of Agriculture, Washington, D. C.; *Councillors,* L. R. Jones, A. D. Selby, and H. H. Whetzel.

Bulletin 63 of the department of agriculture of the central experimental farm, Ottawa, Canada, reports an outbreak in Newfoundland of the very serious potato disease known as potato canker (*Chrysophlyctis endobiotica* Schilb.). This is the first record of this pest for America, it having been formerly known only in Europe.

The presence of the disease cannot be detected until the tubers are lifted from the ground, and, when present, scarcely a healthy potato can be found. The disease first makes its appearance in the eyes of the potato and is here characterized by an abnormal development of the shoot, giving rise to small nodules of a rusty-brown color. Later, the entire potato is attacked and is often completely decomposed.

This is one of the most serious pests of the potato known and the above bulletin is issued as a warning, especially to the potato growers of Canada. It is requested that any suspicion of the presence of this disease be at once reported to the station, together with specimens of the diseased plants.

The following review of Mr. M. C. Potter's paper, "Uber eine Methode, parasitäre Krankheiten bei Pflanzen zu bekämpfen" (Centralb. f. Bakt. 2 ser. **23:** 379–384. 1909), has been kindly contributed by Mr. E. D. Clark:

Pseudomonas destructans is the cause of the so-called "white rot" of the beet. This parasite secretes an enzyme, cytase, which dissolves the cell-walls of the plant, allowing the toxin of the parasite to come into direct contact with the protoplasm of the host, which is thus quickly destroyed. Both the cytase and toxin of *P. destructans* are very powerful, making the organism very virulent. In many cases the products of the life activities are toxic to the growth of a given plant or animal if not removed. This is true in the case of the present organism, for the author found that it produces substances toxic to its further growth, whatever it grows upon. The author's experiments indicate that the toxin thus produced by the growth of the parasite is able to withstand boiling, while the cytase, like most enzymes, is completely destroyed by such treatment. Some of the solutions containing the toxin and cytase were concentrated by vacuum distillation at 60°, which did not alter the toxin, but destroyed the activity of the cytase. In all concentrations, including that of the original culture liquid, the toxin solutions completely stopped further growth of *P. destructans,* both on the beet and in other nutrient media, and, also, as seen under the microscope, all movement was immediately inhibited. The toxin solution is specific in its action only on the parasite producing it, but it also shows a certain destructive effect on the host cells, although the latter soon heal over, since no cytase is present to destroy the cell-walls. Next, the author prepared in the same manner toxin solutions from *Penicillium italicum,* which is the cause of a destructive disease of oranges, lemons, etc. Ths solution showed exactly the same specific inhibiting qualities shown by that of *P. destructans.* From these observations, the author thinks it possible that such toxin solutions obtained in a similar way from growths of bacteria, fungi, etc., might prove to be of great practical importance in combating the ravages of these organisms.